

IN THE CLAIMS:

Please AMEND the claims and ADD new claims as indicated below:

1. (CURRENTLY AMENDED) A system, comprising:
a plurality of nodes communicating signals pursuant to a single channel plan, said channel plan having predefined characteristics for each of a plurality of signal channels;
a spectrum analyzer;
a switch capable of connecting one of said nodes with said spectrum analyzer;
and
a controller controlling said switch to select said one node, said controller capable of monitoring communication of signals on said selected one node ~~nodes~~ by conducting a test plan, said test plan prescribing performance of at least one test, said test plan further configured with at least one alarm limit, the controller further configured to compare results from said at least one test with said alarm limit, the controller further configured to control said spectrum analyzer to perform a failure time spectrum scan when at least one test result exceeds said alarm limit to generate a plot of power amplitude versus frequency over the frequency spectrum of said selected one node.
2. (CURRENTLY AMENDED) The system of claim 1, further comprising a database, wherein said controller is further configured to store said failure time spectrum scan ~~to~~ in the database.
3. (CURRENTLY AMENDED) The system of claim 1, wherein the controller is further configured to control the spectrum analyzer to perform a failure time spectrum scan over the entire frequency spectrum of said selected one node.
4. (ORIGINAL) The system of claim 1, wherein said nodes are part of a cable television network.
5. (ORIGINAL) The system of claim 1, further comprising:
a graphical user interface, wherein said controller is configured to retrieve and communicate said failure time spectrum scan from said database to said graphical user interface for displaying said failure time spectrum scan in response to a user request.

6. (CURRENTLY AMENDED) The system of claim 1, wherein said at least one test is selected from the group consisting of total node power, carrier-to-noise power, percent availability, average noise power, channel power, and burst counter.

7. (ORIGINAL) The system of claim 5, wherein said user request is communicated to said controller via said graphical user interface.

8. (ORIGINAL) The system of claim of claim 5, wherein said controller is further configured to permit a user to configure said spectrum analyzer to repeat the failure time spectrum scan in response to a user request.

9. (ORIGINAL) The system of claim 8, wherein said spectrum analyzer is configured to perform said repeat of said failure time spectrum scan with the same spectrum analyzer configuration.

10. (ORIGINAL) The system of claim 9, wherein said user request is communicated to said controller via said graphical user interface.

11. (CURRENTLY AMENDED) The system of claim 2, wherein said controller is further configured to control said spectrum analyzer to perform said failure time spectrum scan wherein said failure time spectrum scan is performed over a portion of said selected one node's frequency spectrum.

12. (ORIGINAL) The system of claim 11, wherein said controller controls said spectrum analyzer in response to said test plan.

13. (CURRENTLY AMENDED) The system of claim 12, wherein said controller controls said response to said test plan by adjusting ~~the~~ start and stop frequencies sent to configure said spectrum analyzer based on ~~the~~ a respective channel under test at ~~the~~ a time said alarm limit was exceeded.

14. (ORIGINAL) A computer readable medium having a program for enabling efficient monitoring of electrical signals communicated along a plurality of nodes, each node

having a plurality of signal channels, the signals being measured by a spectrum analyzer, the program comprising:

means for receiving signal data sampled by the spectrum analyzer; and

means for testing communication of said signals on at least one of said nodes by conducting a test plan on said signal data, said test plan prescribing measurement of at least one test on at least one node, said means for testing further configured to compare said test results with an alarm limit and to control said spectrum analyzer to perform a failure time spectrum scan when said test results exceed said alarm limit, said failure time spectrum scan representative of power amplitude versus frequency over the frequency spectrum of said node.

15. (CURRENTLY AMENDED) A method ~~for recording the frequency spectrum of electrical signals communicated along a plurality of electrical connections, each connection having a plurality of signal channels,~~ comprising:

~~communicating said signals along each of said plurality of said nodes;~~

testing communication of ~~said a plurality of signals communicated on said nodes~~ a respective node of a network by conducting a test plan, said test plan prescribing measurement of at least one test on ~~at least one~~ the respective node;

comparing results from said at least one test with a user definable alarm limit; and

performing a failure time spectrum scan on said ~~one~~ respective node when said test results exceed said alarm limit, said failure time spectrum scan representative of power amplitude versus frequency over the frequency spectrum of said respective node.

16. (CURRENTLY AMENDED) The method of claim 15, further comprising the step of storing said failure time spectrum scan ~~to~~ in a database.

17. (ORIGINAL) The method of claim 16, further comprising the step of communicating said failure time spectrum scan to a graphical user interface and displaying said failure time spectrum scan on a screen.

18. (CURRENTLY AMENDED) The method of claim 16, wherein said failure time spectrum scan is performed in response to said test plan by adjusting ~~the start and stop frequencies of said failure time spectrum scan based on the~~ a respective channel under test at ~~the~~ a time said alarm limit was exceeded.

19. (ORIGINAL) The method of claim 17, wherein the step of communicating is performed in response to a user request.

20. (ORIGINAL) The method of claim 19, wherein said user request is entered via said graphical user interface.

21. (NEW) An apparatus comprising:
a spectrum analyzer monitoring a plurality of channels corresponding to a respective node of a network in accordance with a test plan for the node, the test plan providing a test in accordance with a channel plan for the plurality of channels; and
a controller automatically performing a failure test spectrum scan for the respective node when a result of the test exceeds an alarm limit for the test.

22. (NEW) The apparatus of claim 21, wherein the respective node is a node of a cable television network.

23. (NEW) The apparatus of claim 21, further comprising:
a graphical user interface, wherein the failure time spectrum scan is displayed on the graphical user interface in response to a user request.

24. (NEW) An apparatus comprising:
a spectrum analyzer monitoring a plurality of channels corresponding to a respective node of a network in accordance with a test plan for the node, the test plan providing a test in accordance with a channel plan for the plurality of channels; and
means for automatically performing a failure test spectrum scan for the respective node when a result of the test exceeds an alarm limit for the test.

25. (NEW) An apparatus comprising:
a spectrum analyzer;
a switch controllable to connect a respective node of a plurality of nodes of a network to the spectrum analyzer, each node having a corresponding plurality of channels; and
a controller controlling the switch to connect a selected node of the plurality of

Serial No.: 09/449,643

nodes to the spectrum analyzer, wherein

the spectrum analyzer monitors the plurality of channels corresponding to the selected node in accordance with a test plan for the selected node, the test plan providing a test in accordance with a channel plan for the plurality of channels corresponding to the selected node; and

the controller automatically performs a failure test spectrum scan for the selected node when a result of the test exceeds an alarm limit for the test.